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EXAMINER

CHAI, LONGBIT

ART UNIT PAPER NUMBER

2131

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,308

Applicant(s)

DOE ET AL

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10 and 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Original application contained claims 1 – 22. Claims 8 and 11 have been canceled; claims 16 and 22 have been amended; and new claim 23 has been added in an amendment filed on 8/28/2006. The amendment filed have been entered and made of record. Presently, pending claims are 1 – 7, 9, 10 and 12 – 23.

Claim Objection

2. Claim 22 is objected to because of the following informalities: “hub features includes” should be “hub feature includes”. Appropriate correction is required.

Specification

3. The application fails to disclose the U.S. applications referenced in the specification (SPEC: Page 1, 1st Para). It is suggested that Applicant update this section by including the US Application serial numbers and the current status of the applications. The relation between the applications must be clearly stated.

Response to Arguments

4. Applicant's arguments with respect to instant claim 22 has been fully considered but are moot in view of the new ground(s) of rejection.

1. Applicant's arguments with respect to the subject matter of the rest of claims have been fully considered but are not persuasive.

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2. As per claim 1 (and related), Applicant asserts Tsuria fails to teach “an installed system tray program configured to allow customization of hub features”. Examiner respectfully disagrees because (a) hub features are interpreted as hub security features and the system tray program is interpreted as the TECM key (Transformed ECM key) and its associated encryption / decryption software (b) Tsuria teaches allowing the IRD hub (Integrated Receiving Device) to provide the TECM key and to be uniquely associated with (i.e. customized) the IRD apparatus (i.e. hub) through the use of smart cards (Tsuria: Column 9 Line 1 – 14 and Column 8 Line 29 – 36) and as such Tsuria does teach an installed system tray program configured to allow customization of hub features. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 7, 9, 16 – 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), and in view of Vu et al. (U.S. Patent 6557104).

As per claim 1, Tsuria teaches an apparatus to enable operation of a computer by authorized users when in a secure mode of operation, the apparatus comprising:

a hub, the hub being configured to be portable and in communication with the computer (Tsuria: Column 6 Line 57 – 62 and Figure 1: IRD (Integrated Receiver-Decoder) is interpreted as the hub) the hub further including,

an installed system tray program configured to allow customization of hub features; a card reader (Tsuria: Column 9 Line 1 – 14: (a) hub features are interpreted as hub security features and the system tray program is interpreted as the TECM key (Transformed ECM key) and its associated encryption / decryption software (b) Tsuria teaches allowing the IRD hub (Integrated Receiving Device) to provide the TECM key and to be uniquely associated with (i.e. customized) the IRD apparatus (i.e. hub) through the use of smart cards and as such Tsuria does teach an installed system tray program configured to allow customization of hub features);

a hub microprocessor (Tsuria: Figure 1)

an encryption engine configured to encrypt / decrypt data communications between the hub and a data storage device protected by the hub (Tsuria: Column 6 Line 56 – Column 7 Line 57) including:

a plurality of encryption/decryption channels (Tsuria: Column 9 Line 66 – Column 10 Line 40 and Figure 1);

Tsuria teaches an encryption channel and decryption channel can be simultaneously passed through the hub device (Tsuria: Column 9 Line 66 – Column 10 Line 40 and Figure 1). However, Tsuria does not disclose expressly a control logic that is configured to determine which encryption / decryption channel is available and direct encrypted data passing through the hub available encryption / decryption channel.

Anand teaches a control logic that is configured to determine which encryption / decryption channel is available and direct encrypted data passing through the hub available encryption / decryption channel (Anand: Figure 7 & 2, Abstract Line 9 – 15, Para [0058] Last sentence and Para [0122]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Anand within the system of Tsuria because Anand teaches improving processor efficiency of a network device by a cryptographic processor that uses multiple independent channels and supports pipelining for efficient use of processor (Anand: Para [0012]).

a card, the card being configured for insertion into the card reader, the card including a card microprocessor (Tsuria: Column 9 Line 1 – 14 & Figure 1 / Element 120); and

However, Tsuria as modified does not disclose expressly a user authentication device, the user authentication device being configured to validate the user as an authorized user of the card wherein, if the user is validated as the authorized user, the

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card microprocessor being configured to pass a key to the hub microprocessor in response to the validation of the user as the authorized user of the card, thereby activating the encryption engine of the hub to allow encryption / decryption of data communications.

Vu teaches a user authentication device, the user authentication device being configured to validate the user as an authorized user of the card wherein, if the user is validated as the authorized user, the card microprocessor being configured to pass a key to the hub microprocessor in response to the validation of the user as the authorized user of the card (Vu: Column 4 Line 52 – 54), thereby activating the encryption engine of the hub to operate in the secure mode of operation (Vu: Column 5 Line 24 – 46).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Vu within the system of Tsuria as modified because Vu teaches providing secure storage and processing of cryptographic keys using in a more reliable secure processor mode / memory (Vu: Column 2 Line 53 – 61).

As per claim 16, claim 16 encompasses the scope at least as described in claim 1 and besides that, in further regards to claim 1, Tsuria as modified further teaches upon the insertion of the smart card into the card reader, a secure path is established between the smart card microprocessor and the ECD microprocessor after completion of authentication of a user and completion of a challenge/response protocol, thereby

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unlocking an encryption engine to allow encryption / decryption of encrypted data communications (Vu: Column 1 Line 38 – 48).

As per claim 7, Tsuria as modified teaches the card microprocessor includes a cryptographic microprocessor (Vu: Column 2 Line 1 – 25).

As per claim 9, Tsuria as modified teaches the hub includes control switches to bypass the hub to operate the computer in a non-secure mode of operation (Vu: Column 2 Line 53 – 61: control switches is a logical switches between the process of secure and non-secure operating modes).

As per claim 17, Tsuria as modified teaches the ECD includes the data storage medium (Vu: Column 5 Line 35 – 36).

As per claim 18, Tsuria as modified teaches the data storage medium is a virtual drive of the computer (Vu: Column 1 Line 35 – 40).

As per claim 19, Tsuria as modified teaches the continued presence of a user is monitored (Vu: Column 6 Line 28 – 30: PIN may be continued to be requested at different stages of operations).

As per claim 21, Tsuria as modified teaches the ECD is configured to effectuate modifying of encrypted data (Vu: Column 6 Line 28 – 30: Authentication and validation

of a user are required to unlock the cryptographic key of the system device in order for the user to gain access to the encryption/decryption functionality, which includes create, modify or copy encrypted data).

6. Claims 1, 5 – 6, 10, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), and in view of Veil et al. (U.S. Patent 6092202).

As per claim 1, Tsuria teaches an apparatus to enable operation of a computer by authorized users when in a secure mode of operation, the apparatus comprising:

a hub, the hub being configured to be portable and in communication with the computer (Tsuria: Column 6 Line 57 – 62 and Figure 1: IRD (Integrated Receiver-Decoder) is interpreted as the hub) the hub further including,

an installed system tray program configured to allow customization of hub features; a card reader (Tsuria: Column 9 Line 1 – 14: (a) hub features are interpreted as hub security features and the system tray program is interpreted as the TECM key (Transformed ECM key) and its associated encryption / decryption software (b) Tsuria teaches allowing the IRD hub (Integrated Receiving Device) to provide the TECM key and to be uniquely associated with (i.e. customized) the IRD apparatus (i.e. hub) through the use of smart cards and as such Tsuria does teach an installed system tray program configured to allow customization of hub features);

a hub microprocessor (Tsuria: Figure 1)

an encryption engine configured to encrypt / decrypt data communications between the hub and a data storage device protected by the hub (Tsuria: Column 6 Line 56 – Column 7 Line 57) including:

a plurality of encryption/decryption channels (Tsuria: Column 9 Line 66 – Column 10 Line 40 and Figure 1);

Tsuria teaches an encryption channel and decryption channel can be simultaneously passed through the hub device (Tsuria: Column 9 Line 66 – Column 10 Line 40 and Figure 1). However, Tsuria does not disclose expressly a control logic that is configured to determine which encryption / decryption channel is available and direct encrypted data passing through the hub available encryption / decryption channel.

Anand teaches a control logic that is configured to determine which encryption / decryption channel is available and direct encrypted data passing through the hub available encryption / decryption channel (Anand: Figure 7 & 2, Abstract Line 9 – 15, Para [0058] Last sentence and Para [0122]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Anand within the system of Tsuria because Anand teaches improving processor efficiency of a network device by a cryptographic processor that uses multiple independent channels and supports pipelining for efficient use of processor (Anand: Para [0012]).

a card, the card being configured for insertion into the card reader, the card including a card microprocessor (Tsuria: Column 9 Line 1 – 14 & Figure 1 / Element 120); and

However, Tsuria as modified does not disclose expressly a user authentication device, the user authentication device being configured to validate the user as an authorized user of the card wherein, if the user is validated as the authorized user, the card microprocessor being configured to pass a key to the hub microprocessor in response to the validation of the user as the authorized user of the card, thereby activating the encryption engine of the hub to allow encryption / decryption of data communications.

Veil teaches a user authentication device, the user authentication device being configured to validate the user as an authorized user of the card wherein, if the user is validated as the authorized user, the card microprocessor being configured to pass a key to the hub microprocessor in response to the validation of the user as the authorized user of the card, thereby activating the encryption engine of the hub to operate in the secure mode of operation (Veil: Column 12 Line 4 – 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Veil within the system of Tsuria as modified because Veil teaches providing secure transaction of computer systems in a more reliable, easier implementation and cost effective manners (Veil: Column 1 Line 5 – 20 and Column 3 Line 30 – 36).

As per claim 10, claim 10 encompasses the scope at least as described in claim 1 and besides that, in further regards to claim 1, Tsuria as modified further teaches the card being adapted to be read by the card reader to validate a user as an authorized

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owner of the card in conjunction with the biometric identifier, wherein upon validation of the user, the encryption engine activates to create a secure environment (Veil: Column 12 Line 4 – 12).

As per claim 5, Tsuria as modified teaches the user authentication device is a biometric scanner (Veil: Column 12 Line 4 – 12).

As per claim 6, Tsuria as modified teaches the biometric scanner scans one of a fingerprint, an iris and a face (Veil: Column 12 Line 4 – 12).

As per claim 12, Tsuria as modified teaches the encryption engine executes RSA public-key cryptosystem (Veil: Column 4 Line 46 – 55).

As per claim 23, Tsuria as modified teaches the customization of the portable encryption control device includes an ability to allow remote locking of the portable encryption control device (Veil: Column 9 Line 63 – 65 and Column 11 Line 56 – 65 and Figure 4: the successful sending of PIN via host interface, as shown in Figure 4, would unlock (or lock otherwise) the portable encryption control device (Figure 4 / Element 104)).

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7. Claims 2 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Vu et al. (U.S. Patent 6557104), and in view of Morais et al. (U.S. Patent 2003/0093669).

As per claim 2, Tsuria as modified does not teach the hub includes a plurality of USB ports.

Morais teaches the hub includes a plurality of USB ports (Morais: Para [0033] and Para [0036]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Morais within the system of Tsuria as modified because Morais teaches establishing secure communications between computer systems connected in a networking environment (Morais: Para [0001]).

As per claim 3, Tsuria as modified does not teach the hub includes a plurality of FIREWIRE ports.

Morais teaches the hub includes a plurality of FIREWIRE ports (Morais: Para [0033] and Para [0036]).

Same rationale of combination applies herein as above in rejecting the claim 2.

As per claim 4, Tsuria as modified does not teach the computer is connected to the hub through one of a USB or FIREWIRE interface.

Morais teaches the computer is connected to the hub through one of a USB or FIREWIRE interface (Morais: Para [0033] and Para [0036]).

Same rationale of combination applies herein as above in rejecting the claim 2.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Veil et al. (U.S. Patent 6092202), in view of Lelong et al. (PN: 6463540).

As per claim 13, Tsuria as modified does not disclose expressly the encryption control device is hot pluggable.

Lelong teaches the encryption control device is hot pluggable (Lelong: Column 1 Line 52).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lelong within the system of Tsuria as modified because Lelong teaches a more flexible and dynamic mechanism of an attachable interface of computer systems (Lelong: Column 1 Line 45 – 52).

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Veil et al. (U.S. Patent 6092202), in view of Walter et al. (U.S. Patent 6151677).

As per claim 14, Tsuria as modified does not disclose expressly the encryption engine is a field programmable gate array.

Walter teaches the encryption engine is a field programmable gate array (Walter: Column 3 Line 56 – 57).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Walter within the system of Tsuria as modified because Walter teaches providing a more flexible and secure method by using a programmable information security architecture with a firmware implemented data encryption and decryption algorithms (Walter: Column 3 Line 50 – 61).

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Veil et al. (U.S. Patent 6092202), in view of Vu et al. (PN: 6557104).

As per claim 15, Tsuria as modified does not disclose expressly the card includes a card microprocessor, the card microprocessor being configured to execute a challenge/response protocol for establishing a secure path through the encryption control device.

Vu teaches the card includes a card microprocessor (Vu: Column 2 Line 1 – 25), the card microprocessor being configured to execute a challenge/response protocol for establishing a secure path through the encryption control device (Vu: Column 1 Line 34 – 46).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Vu within the system of Tsuria as

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modified because Vu teaches an enhanced security system for secure processing of cryptographic keys (Vu: Column 1 Line 7 – 9).

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Vu et al. (U.S. Patent 6557104), and in view of Miller (PN: 6038320).

As per claim 20, Tsuria as modified does not disclose expressly the ECD is locked by a hot key sequence.

Miller teaches the ECD is locked by a hot key sequence (Miller: Column 1 Line 41 – 42).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Miller within the system of Tsuria as modified because Miller teaches a flexible and enhanced security method to securely protect the computer from unauthorized access (Miller: Column 1 Line 40 – 47).

12. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuria (U.S. Patent 6178242), in view of Anand et al. (U.S. Patent 2002/0191793), in view of Vu et al. (U.S. Patent 6557104), and in view of Davis et al. (U.S. Patent 6088450).

As per claim 22, Tsuria as modified does not disclose expressly the customization of hub feature includes an ability to allow a user to select secure hub ports and permits a user remote locking of the hub.

Davis teaches the customization of hub feature includes an ability to allow a user to select secure hub ports and permits a user remote locking of the hub (Davis : Column 2 Line 52 – 57: the selection of secure hub ports is interpreted as similar to manual switches ON / OFF the encryption control device to the non-operational state in an unattended mode).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Davis within the system of Tsuria as modified because Davis teaches a flexible and enhanced security method to securely protect the computer from unauthorized access during the unattended mode (i.e. in the absence of the valid user (Davis : Column 2 Line 50 – 57)).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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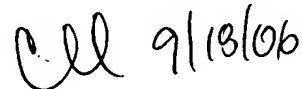
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Longbit Chai
Examiner
Art Unit 2131

LBC



CHRISTOPHER REVAK
PRIMARY EXAMINER

 9/13/06